

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT (PCT Article 36 and Rule 70)



Applicant's or agent's file reference GW-SAR-9343-PCT		FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/PEA/416)	
International application No. PCT/GB 03/02377	International filing date (day/month/year) 30.05.2003	Priority date (day/month/year) 01.06.2002	
International Patent Classification (IPC) or both national classification and IPC B05B5/00, B05D1/02			
Applicant SURFACE INNOVATIONS LIMITED et al.			


- This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
- This REPORT consists of a total of 6 sheets, including this cover sheet.

☒ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 5 sheets.

- This report contains indications relating to the following items:

- I ☒ Basis of the opinion
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand 24.11.2003	Date of completion of this report 09.09.2004
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International application No. **PCT/GB 03/02377**

I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

Description, Pages

1-11 as originally filed

Claims, Numbers

1-32 filed with telefax on 09.07.2004

Drawings, Sheets

1/2, 2/2 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
☐ the language of publication of the international application (under Rule 48.3(b)).
☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority in written form.
☐ furnished subsequently to this Authority in computer readable form.
☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
☐ the claims, Nos.:
☐ the drawings, sheets:

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5. ☒ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

see separate sheet

6. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	3,11,12,15-18,21,24-26,28,29
	No: Claims	1,2,6-10,13, 14, 19, 20, 22, 23, 27, 30-32
Inventive step (IS)	Yes: Claims	
	No: Claims	1-3, 6-32
Industrial applicability (IA)	Yes: Claims	1-3, 6-32
	No: Claims	

2. Citations and explanations

see separate sheet

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International application No. PCT/GB 03/02377

D1: DE-A-36 18 630
D2: WO-A-02 28 548
D3: US-A-6 001 426
D4: WO-A-03 097 245
D5: US-A-5 609 921(enclosed)

Re Item I

The amended set of claims does not meet the requirements of Art. 34(2)(b) PCT:

1. The amendments introduced to claim 1 go beyond the disclosure in the international application as filed, since the originally filed documents appear to disclose only the activation of the coating forming material **prior to** (see page 3, paragraph 3 and original claim 12) or **prior to and during** (see page 3, paragraph 3 and original claim 11) deposition of the material onto the substrate. All other activation sequences covered by the formulation "prior to, during, and/or after" in amended claim 1 (eg after deposition, during deposition, during and after deposition, prior to and after deposition etc) do not appear to be originally disclosed.
For further examination line 5 of present claim 1 is interpreted to read "material prior to the material being deposited or prior to and during the material being".
2. New claims 4 and 5 and the amendments introduced to claim 27 (original claim 25) go beyond the disclosure in the international application as filed, since the originally filed documents appear to disclose the "atmospheric pressure" and the "less than atmospheric pressure" only for the exciting medium being "a pulsed plasma discharge" (see paragraph bridging pages 2 and 3 or page 6, last paragraph). Thus, present claims 4, 5 and 27 contain a generalization which do not appear to be deducible from the application documents as originally filed.
For further examination present claims 4 and 5 are disregarded and line 6 of present claim 27 is interpreted to read "that facilitates".
3. The amendments introduced to present claim 32 (original claim 32) do not meet the requirements of Art. 32(2)(b) PCT, since the formulation "means for operating the chamber at less than atmospheric pressure" in this claim constitutes an inadmissible generalization over what is originally disclosed (see example 1, where the evacuation means is a special pump coupled to a cold trap etc.).
For further examination lines 5 and 6 of present claim 32 are interpreted to read "within the chamber, and a means for holding at".

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Re Item I

1. Art. 6 PCT requires the individual claims and the set of claims as a whole to be concise and Rule 6.4(a) PCT defines "Any claim which includes all the features of one or more other claims" to be a dependent claim and requires such a claim to contain "a reference, if possible at the beginning, to the other claim or claims and shall then state the additional features claimed".
These requirements are not fulfilled in the present case as, although formulated as an independent claim, claim 27 appears to comprise all the features of independent claim 1.
2. The expressions "exciting medium" ("to excite": to call into activity, to stir up, to energise, etc; "medium": a substance through which any effect is transmitted) and "activation" ("to activate": to increase the energy of, to stimulate, etc) utilized in claim 1 (cf item I, point 1 of this report) are general to such an extent that even document D1 reads on claim 1 (and claims 2,6,7,9,20), since this document discloses a process wherein a coating is deposited onto a substrate by introduction of an atomized coating forming material 2.0 (reference signs according to D1) into a pulsed exciting medium 3.3 wherein it is energised and stirred up.
Consequently, the subject-matter of claim 1 (claims 2,6,7,9,20) is not new, so that the requirements of Art. 33(2) PCT are not met.
3. Document D5 discloses a method for depositing a coating onto a substrate (D5, column 1, line 8), said method comprising the introduction of an atomised coating forming material into an exciting medium (D5, column 4, lines 30 to 38), said exciting medium causing activation of the atomised coating forming material prior to the material being deposited onto the substrate to form the coating thereon (D5, column 4, lines 44 to 61). The exciting medium is pulsed (D5, column 3, lines 39 to 54 in view of the paragraph bridging pages 2 and 3 of the present application). Thus, the subject-matter of claim 1 is not new. The requirements of Art. 33(2) PCT are not met with regard to document D5.
5. The subject-matter of claim 1 differs from the process disclosed in D2 (eg claim 1) in that the exciting medium is pulsed (and not even therein, if - in view of the paragraph bridging pages 2 and 3 of the present application - the microwave glow discharge described in D2, page 3, lines 8 to 11 is considered to constitute a

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pulsed plasma discharge). However, the prior art of spray coating teaches that the utilisation of a pulsed exiting medium (cf also item V, point 2 of this report) is advantageous (see eg D3). Consequently, the subject-matter of claim 1 cannot be considered to be based on an inventive step in the light of D2 and eg D3.

6. On account of the same arguments as mentioned above, the apparatus defined in claim 32 (cf item I, point 3 of this report) is not considered to be new with regard to D5 or to be based on an inventive step with regard to D2 and eg D3, either.
The requirements of Art. 33(2), (3) PCT are not met.
7. The features of the dependent claims either follow from D2 or D5 or seem to be evident with regard to the respective circumstances, so that the dependent claims (concerning claim 27 it is made reference to item I, point 2 and item V, point 1 of this report) do not meet the requirements of Art. 33(2) or (3) PCT, either.
8. It is additionally also made reference to document D4 which has been published (27/11/03) after the priority date (01/06/02) of the present application but has an earlier priority date (17/05/02).